A CESTODE PLEROCERCOID FROM THE CROWNED CONCH

James D. Regan

During the spring of 1960 a number of marine invertebrates from the intertidal zone of Apalachee Bay, Florida, were examined for the presence of helminthic parasites. As a part of this study, on May 26, 1960, 17 specimens of the crowned conch, *Melongena corona* Gmelin, were collected at Live Oak Point, Florida. One of these, having a shell length of 12.5 cm, harbored three specimens of a cestode plerocercoid of the order Tetraphyllidea, family Phyllobothriidae. They were recovered from the mantle cavity of the host where they were attached to the dorsal surface of the body, about 1 cm posterior to the head. This report presents a description of these larvae and is a first record of a phyllobothrid plerocercoid from this host.

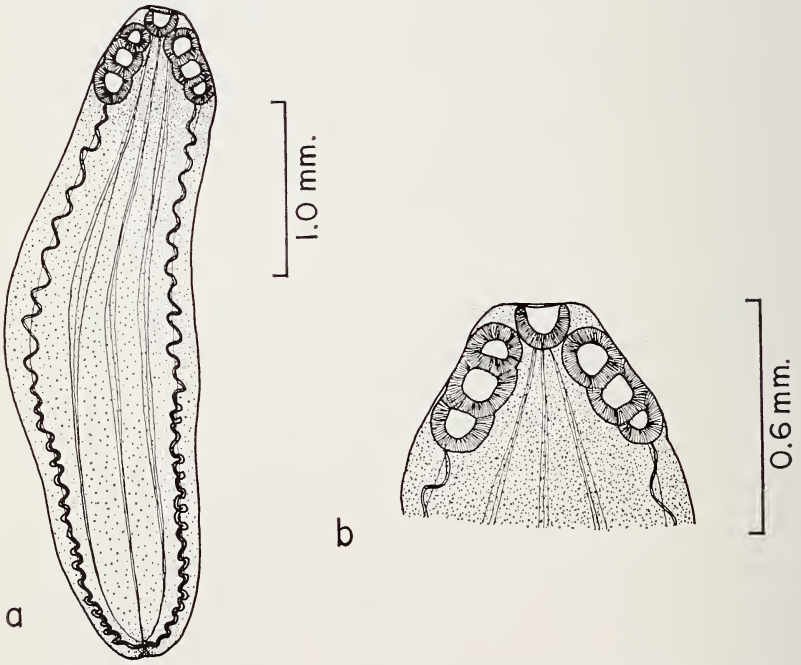

Fig. 1. Plerocercoid of a tetraphyllidean cestode from *Melogena corona*. a. Whole mount of specimen no. 2, total length 4 mm. b. Detail of scolex of specimen no. 2, total length 4 mm.

MATERIALS AND METHODS

The larvae were fixed in AFA under slight pressure, stained in acetocarmine, and mounted whole in Permount. The following description is based on a study of all three specimens. Measurements indicate the range of the series. Terminology is as recommended by Wardle and McLeod (1952).

OBSERVATIONS

Body flattened, elliptical in outline, total length 4-6 mm, greatest width (mid-portion of body) 1-1.2 mm; width at junction of scolex and body 700-900 microns; length of scolex 700-900 microns. Four sessile bothridia, two dorsal, two ventral; each bothridium divided by costae into one central and two smaller secondary areolae. Myzorhychus low, moundlike, with a muscular apical sucker. Walls of bothridia contracted marginally, showing striations. Lateral osmoregulatory canals proceeding caudad in a zigzag fashion, becoming more evident posteriorly; small caudal bladder present with caudal indentation at excretory pore.

In figure 1, which was made using the reticule grid-graph paper method, the holdfast is slightly contracted. These specimens were observed alive for about one hour before fixation and, although partial contraction of the holdfast was often seen, at no time did any of the three plerocercoids completely invaginate the holdfast.

DISCUSSION

This plerocercoid seems to be another form in the variety of larvae that have been described under the name *Scolex pleuronectis* Mueller 1788. They have been known for over 150 years and have been described from a variety of marine animals including fishes (Monticelli, 1888), copepods (Wundsch, 1912) ctenophores (Van Cleave, 1927), and mollusks (Hyman, 1951).

Regarding these larvae, Wardle and McLeod (1952) stated: "They differ from one another mainly in the degree to which the apical sucker is developed, in the size and shape of the bothridia, in the presence or absence of cross partitions or 'costae' on the bothridial surfaces, and in the presence or absence of patches of red pigment on the holdfast."

The absence of hooklets on the holdfast of this plerocercoid seems clearly to place it in the family Phyllobothriidae. Further

taxonomic placement is difficult, however, for a number of reasons. Considerable difficulty has been encountered in proper generic

Fig. 2. Plerocercoid of a tetraphyllidean cestode from *Melogena corona*. Specimen no. 2, total length 4 mm.

placement of even the adult forms of this group (Southwell, 1930). Also, similar "*Scolex pleuronectis*" larvae apparently develop into a number of different species in the final host (Hutton, 1961).

It is possible that the final host of this plerocercoid may be a ray, possibly a species of *Dasyatis*. Rays are known to feed on mollusks of this kind, whose shells they are equipped to crush with their pavement dentition. Rays are quite common in the area where this plerocercoid was found, and several adult phyllobothrid cestodes have been identified from the spiral valve of *Dasyatis sabina* from this region (Loftin, 1960).

Acknowledgments

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Department of Biological Sciences, Florida State University, Tallahassee, Florida (present address: *Department of Genetics, University of Hawaii, Honolulu, Hawaii*).